

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

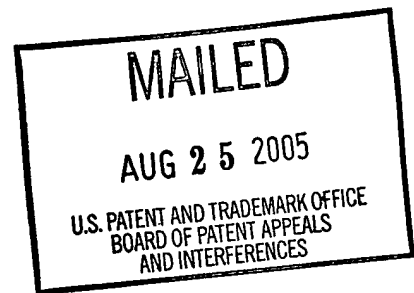
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID W. CHEW

Appeal No. 2005-1841
Application No. 09/670,261

ON BRIEF



Before HAIRSTON, KRASS and NAPPI, Administrative Patent Judges.

HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 6, 7, 9, 10, 16, 17, 19, 20, and 51 through 70. Claims 1 through 5, 11 through 15 and 31 through 50 have been allowed, and claims 25 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The disclosed invention relates to a voice coil for a disk drive that comprises a rotatable spiral winding of conductive material that generally defines a triangular shape with an open center.

Claim 6 is illustrative of the claimed invention, and it reads as follows:

6. A voice coil for a disk drive comprising: a rotatable spiral winding of conductive material defining a flat band with a generally triangular shape with an open center, first and second active leg portions and an inactive leg portion, a first curved corner portion connecting the first and second active leg portions, a second curved corner portion connecting the first active leg portion with the inactive leg portion, and a third curved corner portion connecting the second active leg portion with the inactive leg portion, the cross-sectional area of the band varying along its length.

The references relied on by the examiner are:

Yamamoto et al. (Yamamoto)	4,728,390	Mar. 1, 1988
Iwabuchi	5,973,421	Oct. 26, 1999
		(filed Apr. 18, 1997)
Rao	6,040,650	Mar. 21, 2000
		(filed Sep. 30, 1998)

Claims 6, 7, 9, 10, 16, 17, 19, 20, 51 through 62 and 64 through 70 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rao in view of Iwabuchi.

Claim 63 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Rao in view of Iwabuchi and Yamamoto.

Reference is made to the brief and the answer for the respective positions of the appellant and the examiner.

OPINION

We have carefully considered the entire record before us, and we will reverse the obviousness rejections of claims 6, 7, 9, 10, 16, 17, 19, 20 and 51 through 70.

Rao discloses a triangular-shaped coil winding 30 of a stator (Figure 1). The stator includes a plurality of the triangular-shaped coils (Figure 4a). The examiner acknowledges (answer, page 3) that Rao fails to disclose a rotatable winding, and the winding being used in a voice coil for a disk drive.

Although we agree with the examiner's statement (answer, page 3) that the voice coil motor actuator 16 in Iwabuchi is used in a magnetic disk drive, and includes "a rotatable spiral winding (18) made of conductive material defining a flat band with a generally triangular shape with an open center (Figures 1A, 1B)," we do not, however, agree with the examiner's statement (answer, page 4) that the triangular-shaped coil has first and second active leg portions and an inactive leg portion. Iwabuchi is silent as to such active and inactive leg portions of the voice coil.

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Based upon the teachings of the applied references, the examiner concludes (answer, page 4) that "[i]t would have been obvious at the time . . . the invention was made to use the structure of the winding as disclosed by Rao in a voice coil for a disk drive having rotatable spiral winding as disclosed by Iwabuchi, since it is known in the art the voice coils have advantages, such as: easier assembly; reduced cost of manufacture and it provides a compact structure."

Appellant argues (brief, pages 8 through 12) that Rao is directed to a stator (i.e., stationary) winding as opposed to a rotatable spiral winding of a voice coil that is used in a disk drive, that the proposed modification of the references is vague and confusing, that there is a lack of motivation for the proposed modification, and that the examiner has resorted to hindsight reconstruction to demonstrate obviousness of the claimed subject matter.

We agree with appellant's arguments. The examiner has not presented a convincing line of reasoning as to how or why the skilled artisan would have used the voice coil (i.e., movable) teachings of Iwabuchi to modify the stator (i.e., stationary) winding teachings of the dissimilar motor disclosed by Rao. The record before us is silent as to the purported advantages of

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"easier assembly; reduced cost of manufacture and . . . a compact structure" (answer, page 4). As noted in In re Lee, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002), an examiner's conclusory statements based on subjective belief and unknown authority cannot take the place of evidence in the record to demonstrate the obviousness of the claimed subject matter. In the absence of such a convincing line of reasoning for combining the teachings of the references, we agree with the appellant that the examiner has used impermissible hindsight to demonstrate the obviousness of the claimed invention. Thus, the obviousness rejection of claims 6, 7, 9, 10, 16, 17, 19, 20, 51 through 62 and 64 through 70 is reversed.


The obviousness rejection of claim 63 is reversed because the teachings of Yamamoto fail to cure the noted shortcomings in the teachings of Rao and Iwabuchi.

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DECISION

The decision of the examiner rejecting claims 6, 7, 9, 10, 16, 17, 19, 20 and 51 through 70 under 35 U.S.C. § 103(a) is reversed.

REVERSED


KENNETH W. HAIRSTON
Administrative Patent Judge


ERROL A. KRASS
Administrative Patent Judge

BOARD OF PATENT
APPEALS AND
INTERFERENCES


ROBERT E. NAPPI
Administrative Patent Judge

KWH: hh

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